

Mem
MEMORIAL

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OF

WILLIAM HUME, M. D.

TO THE

HONORABLE THE MAYOR AND ALDERMEN

OF THE

CITY OF CHARLESTON.

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MEMORIAL.

To the Honorable the Mayor

and Aldermen, of Charleston—

The memorial of WM. HUME respectfully sheweth :

That the continuous study of the phenomena of Yellow Fever, as it appears in the Harbour and City of Charleston, will finally lead to the adoption of such rules and regulations as are calculated to relieve the inhabitants from the danger of its introduction, while, at the same time, they impose no unnecessary or unreasonable restraint upon merchants engaged in the West India trade, now known to be detrimental, if not fatal, to all other commerce. It is an established principle that the minority must yield to the majority—that the lesser West India commerce must yield to the greater commerce of the rest of the world ; but the privileges of the minority need not be totally destroyed, but simply regulated with respect to time and mode of conduction. The acts of the General Assembly have given all power to the City Authorities, to make and execute such rules and regulations as shall protect the State from the introduction of dangerous diseases, and to accomplish the desired and delegated trust, complete and accurate knowledge should be obtained, and rigid and comprehensive plans adopted to suit every emergency. It does seem strange, that after one hundred years of observation and disputation, physicians should not be unanimous with respect to the origin of this disease in our city. It is certain that the facts have never varied ; but the logicians have arrived at two opposite and antagonistic conclusions, by different systems of reasoning, or they have misinterpreted the facts. The great error has been, that as the disease has

been studied as, and when it existed in infected cities, the conclusion must naturally be that it is of domestic origin. On this point there cannot be a question—every fact and case tends to prove the same conclusion. Every individual in the infected city is liable to the disease, as he is similarly surrounded with the same infected atmosphere. This conclusion is equally true of an infected house on the land, or an infected ship on the ocean. Every visitor to either is as liable to the disease as if he was in the infected city. Observations of this kind, induced DEVEZE and RUSH to assign a local origin to the disease, while prevailing in Philadelphia, as early as 1793. They identified it with the common, local fevers of the country, and concluded that the two diseases were similar, in all respects, and differed only in degree of intensity. This doctrine was introduced into South Carolina by Doctor RAMSAY, in 1801, and has continued to prevail, more or less, ever since. The identity of the two diseases being established by the facts and reasoning of these leading physicians, the next step was to establish the identity of origin, which was easily done. The indigenous fevers were well known to proceed from the soil and vegetation of the country, and the Yellow Fever being identical, must have a similar origin from the soil and filth of the city, and so it was decreed and published, and so has Charleston suffered for sixty years, as the fruit of her credulity to false doctrines. Another unfortunate error of Drs. DEVEZE and RUSH, was the conclusion, from their observations and reasoning, that as the Yellow Fever had a local origin in cities, it was not necessary to assign it a contagious property; in other words, they deprived it of the property of self-propagation. They taught that all new cases in cities were produced from local, and not personal causes. Hence all sanitary regulations were to be directed to places, and not to persons. Such has been

the practice of our city for the last fifty years, and the amount of success is well known to all. The greater prevalence of the disease in low, moist and filthy localities, has seemed to confirm the truth of the local origin, and has been the means of fixing conviction in the minds of many. In fact every observation made in an infected city seems to confirm the theory of local origin, in the same manner as the continuous burning of an anthracite coal fire would convey to the mind of an ignorant person, that the adaptation of the coal and the grate to each other was not only the cause of combustion, but also the cause of ignition. DEVEZE and RUSH observed the fire burning in 1793, they saw it extinguished on the advent of cold weather; they saw it again burning in 1795, but they did not notice nor inquire into the manner of ignition. They were satisfied, like any gentleman who comes down to breakfast to find his fire burning without inquiring of his servant how he had kindled it. That combustibles will burn after ignition, everybody knows, but the mode of ignition is sometimes involved in obscurity. The mode of ignition in the case of Yellow Fever has also been involved in obscurity, one, the RUSH party, maintaining spontaneous ignition—the other assuming that some of the same fever must be first applied to effect ignition, and then extension follows. Now, it is evident, if we can show that the application of the disease to a city will produce the disease in the city, and the non-application will preserve continued health, we will have advanced a step beyond DEVEZE and RUSH, and developed some of the secrets of the disease, which they omitted to investigate, and which are destined to lead to important practical results in the exclusion of the disease from our commercial cities. The ignition of a house in a city is considered to be a serious affair, requiring legal investigation and subsequent hanging of the incendiary; but the ignition of Yellow Fever

is erroneously assumed to be a spontaneous event, requiring no further investigation—an incident to commerce—a destiny of maritime cities, and a natural consequence of an accumulated population in a limited, naturally unhealthy space. I cannot see it in this light. They are both natural phenomena, produced by the agency of man, injurious to society, and capable of prevention by the agency of the law, when wisely and judiciously applied. It is to add to the wisdom and judiciousness of the present Quarantine law, that the present memorial is presented. It is to investigate its action during the past summer, and develop its advantages and correct its defects. It is not to be presumed that a perfect law can be contrived and executed in the face of dispute, and opposition of interested parties. Important points must be yielded for a time at least, while unnecessary restrictions may have been introduced and now found to be useless. Experience and time is necessary to the perfection of law, as well as other things, and the experience of the past summer has shown that our law is loose in some details, and unnecessarily stringent in others. The correction of these discovered errors is equally due to the citizens and the merchants interested in the particular trade that the Quarantine is designed to regulate. It is not my design to give a history of the Quarantine transactions of the past summer, but only to point out the facts which have led me to recommend certain amendments in the present law.

The first defect is the clause which regulates the time of detention at Quarantine to “at least thirty days after arrival,” and “at least twenty days after the cargo shall have been discharged.” An active merchant can discharge the cargo in ten days, and claim admission to the city in thirty days after arrival. Suppose this had been done in the case of the *Ciscar*, which arrived in our harbor on the 8th of July, with three cases of fever on board? She would have been admitted to

the wharf on the 8th of August, at the very best period to expand her infection and inflame the city. Had this been done, the date of Yellow Fever this season would have been the 15th of August, with its gradual increase through September as usual; but as it was not done, we were exempt from the disease at that time. That the *Ciscar* was an infected vessel, no one can doubt, and that she was capable of doing mischief had she been allowed to come to the city, is founded on the observations of similar vessels in previous years.

The next and most palpable danger to the city, was the *Koophandel*, which arrived on the 27th June, in 49 days from Rio, loaded with 4,000 bags of Coffee. Had the consignee been active in the discharge of the cargo, and the laws executed according to its letter, she would have been admitted to the wharf on the first day of August—and, allowing seven days for diffusion of the poison, Charleston would have been infected on the 7th, the customary period, with all the consequences usually observed on such occasions of early introduction. Happily, the Mayor and Council refused all concession in her favor, and she was not permitted to come to the wharf. Arriving from an infected port, she was presumed to be infected, although there was no disease on board—a presumption which was fully borne out by subsequent facts, and showed the wisdom of the law in putting on an equality of danger all vessels coming from infected ports, irrespective of the length of passage. That the *Koophandel* was an infected vessel, is proved by the consequences of her union with the *Johannes*, which arrived from Embden, Hanover, and of course was free from Yellow Fever, but was infected with Typhus, or Ship Fever. They came together on the 11th of August for the purpose of transferring the ballast of the *Johannes* into the *Koophandel*, which was done by the united crews, and they separated on the 17th: on the 27th a man and boy of the

Johannes were sent to the Marine Hospital, where the disease was discovered to be Yellow Fever, and they were remanded to the ship, and died. At this time both vessels had left the Quarantine station, and were in Ashley River, loading with lumber. Additional proof of the infection of the Koophandel, and consequently of the Johannes, may be drawn from the following extract of a letter from Havre, dated Nov. 2d, 1857: "We have to report the arrival of the Caractacus on the 30th ultimo, with the loss of her captain, and one or two of her crew by Yellow Fever." The Caractacus was in Ashley river with the infected vessels, and the captains of the Koophandel and Caractacus were intimate—stayed at the same boarding house, (Mrs. DIBBLE's, King street, No. 249,) and daily visited each other in their respective ships. The C. left Charleston on the 16th September. There was no other suspected vessel in Ashley River, and there is no proof that the river itself is capable of converting the malarial fevers of its western bank into Yellow Fever. Hence the conviction of the Koophandel as the source of the subsequent development of the especial fevers on board the Johannes and Caractacus, is neither unwarrantable nor unprecedented. Abundant authority is on hand to prove similar occurrences at other and previous times, not only in cases of direct inter-communication, but where approximation alone was the means of extension. It is possible that Capt. GRIGGS may have taken his disease from the adjacent infected Johannes, but it is certain that the sailors of the Johannes took their disease from the Koophandel. In computing the duration of infection on board of the Koophandel, we find it to be 94 days from her departure from Rio to her union with the Johannes, 104 to her separation, and 114 to the development of the disease in the crew of the attached vessel. If a vessel can retain infection for 94 days, and still be capable of infecting another, of what value is a

detention of 'not less than thirty days' at Quarantine? It is an inconvenience to commerce, without protection to the city—for it is apparent that had the Koophandel hauled into one of the docks on the 17th August—104 days after leaving Rio, she was capable of infecting any adjacent vessel, or any unacclimated subject who should go on board; for what so readily took place in the open harbour, was more likely to occur in the less ventilated dock, and the enemies of Quarantine would have rejoiced in another case of spontaneous ignition of the fever, attributable to the filthy dock, unconnected with foreign introduction, and exhibiting the perfect fallacy and folly of all Quarantine regulations. A fallacy is not necessarily a folly, but it would be a folly hereafter to limit a Quarantine to 30 days, when we now know that the infection will remain in a vessel for more than 94 days, and possibly as long as she remains in a Tropical climate, or a mean temperature of 80° or 75° . The continuity, or permanency of Yellow Fever in the Havana may be attributed to this peculiarity of the disease. It regularly diminishes its ravages during the winter months, when the thermometer descends to 60° , but revives again during the summer, when the thermometer indicates a temperature above 80° . In our latitude it is totally destroyed by the degree of cold that prevails in winter, and cannot be revived by the returning summer, but may readily be introduced from abroad when the tropical season returns. We have the grate, the coal, and the lightwood ready every summer; and to avoid ignition, we must extinguish the lighted match at Morris Island. Conflagrations never occur without previous ignition, and he who studies conflagrations, without reference to previous ignition, may learn how to diminish their ravages, but will never know how to prevent their occurrence. It is the privilege of our age to study the introduction, or origin of Yellow Fever, beyond the zone of its perpetual pre-

valence, and to show that the principles seemingly established by observation during its prevalence, are not competent to account for its origin. We are not disposed to question the received opinion, that a long voyage in a crowded ship, bad or deficient food, filth, and other circumstances connected with emigrant vessels, should produce Typhus Fever on board. Such was probably the case with the *Johannes*. The emigrants were landed at Morris Island—the ship was purified, and the captain and crew remained well until the 19th of August, when the captain and two of the crew took Typhus Fever, of which the captain died on the 24th, and the sailors recovered. Up to this period, the Typhus infection predominated; and on the 27th it became converted into the Yellow Fever infection, as appears from the cases seen in the Marine Hospital. Now, was this conversion of one disease into another, the result of the action of local causes on board of the vessel, under the influence of our climate, or was it the direct transfer of the Yellow Fever infection from the *Koophandel*, and the subjugation of the Typhus infection on board of the *Johannes*? The contest for supremacy may have taken place with the captain and the two sailors, who sickened two days after the separation with symptoms of Typhus, while the announcement of the victory was manifest in those who sickened on the 27th. It has been said “that Yellow Fever lends its livery to other diseases.” It may also be true “that Yellow Fever borrows the livery of other diseases;” and Captain COOPER, of the *Johannes*, may have died of Yellow Fever, under the borrowed and predominant livery of Typhus. Be this as it may, it is evident that there was no local cause in the *Johannes*, or its vicinity, adequate to produce this conversion of one fever into another save and except the presence of the infected *Koophandel*.

The liability of vessels to infect each other at Quarantine, and then to infect the city, after liberation and arrival at the

wharf, is a matter worthy of consideration, and by no means impossible and unfrequent. The rigor of the last summer's action, under the Quarantine laws prevented such a calamity. The St. Juan arrived from Porto Rico on the 12th July, then healthy and with all well on board. She was detained at Quarantine until the 27th of August, when she was allowed to come up into Cooper River, and remain at the mouth of Hog Island Channel, opposite the city. On the 12th August, her period of regular Quarantine terminated. Inter-communication between the vessels was no longer prohibited. She lay in the immediate vicinity of the Ciscar, with boats unlocked, and every facility for communication. To what extent the privilege was used is unknown; but on the 3d of September a death by Yellow Fever occurred on board of the St. Juan, and another on the 7th, while she lay opposite the city, and at the mouth of Hog Island Channel. What effect these cases would have produced in the city, had the vessel been previously permitted to come to the wharf it is impossible to say; but no injurious effect was produced by her absence—and we have reason to believe that this was the third time that the city was saved from infection, by prohibiting the vessels from coming up to the city after the thirty days detention at Quarantine had expired. It is satisfactory to know that notwithstanding the clamor of some merchants against the rigid and uncompromising execution of the Quarantine laws, the city was saved from pestilence on three separate occasions, and finally received the infection by indirect means, and in a manner fully demonstrating the fundamental error of the law which liberates vessels after a detention of thirty days. It will elsewhere be shown that the St. Juan at the mouth of Hog Island Channel infected the Village of Mount Pleasant; and the introduction of the sick from this village into the city, gave

rise to a few cases which, fortunately, occurred so late in the summer that propagation was not general.

If this thirty day Quarantine is now seen to be so disastrous, it may be asked why it was enacted? In reply, we answer that it was the longest period that could be obtained at a time when the whole law was considered to be oppressive, impracticable and useless. It was accepted on the hope that the interests of merchants would never allow their vessels to be detained in idleness, for so long a period, when they had the right to discharge the import cargo, receive an export, and proceed to sea as soon as possible. But this reasonable expectation has not been realized—for six of the Quarantine vessels have remained in the harbor during the whole summer, and four of the six were infected on arrival, or by subsequent contamination, and were capable of infecting the city had they been permitted to enter the docks. From dangers so palpable it is designed to save the city, by the proposed amendment of the law. It is converting a discretion into an obligation, and relieving those in authority from perpetual petitions to do what the spirit of the law prohibits, and what the safety of the city demands. An accumulation of infected ships in our harbor is always dangerous, and it is not always necessary. The object of the present recommendation is to limit their stay, and thus prevent their inordinate increase and consequent amount of infection and continuity of danger. Thirty days is fully sufficient to discharge and take in a cargo; and then the vessel may be ordered “to depart the State,” by virtue of the Act of General Assembly, passed December 20th, 1832, Sec. IV. viz: “That the Governor of the State, and in his absence the City Council of Charleston, shall have full power and authority to order any vessel arriving within the harbor of Charleston, with a malignant or contagious

disease or distemper on board any such vessel, or with the crew or passengers infected with the same, to depart the State at such time and upon such notice as the Governor or City Council shall think proper and most consistent with the safety and health of the said City of Charleston."

Respectfully submitted,

WM. HUME, M. D.

